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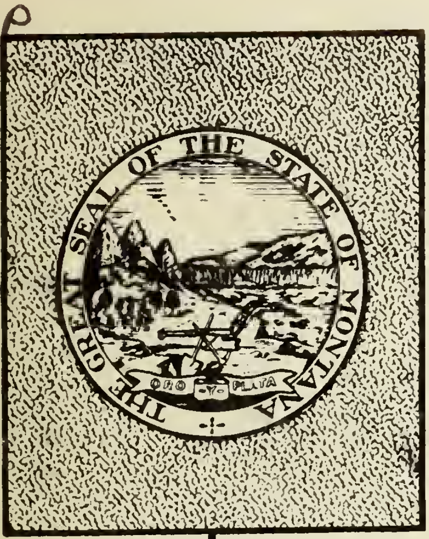

THE GREAT SEAL OF THE STATE OF MONTANA
ORO Y PLATA

A PROPOSAL FOR THE DEVELOPMENT OF THE GOVERNOR'S COMMAND CENTER

STATE OF MONTANA
DEPARTMENT OF ADMINISTRATION
COMMUNICATIONS DIVISION

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DEPARTMENT OF ADMINISTRATION
HELENA 59601

THOMAS L. JUDGE, Governor
DOYLE B. SAXBY, Director

August 28, 1974

The Honorable Thomas L. Judge
Governor of Montana
State Capitol
Helena, Montana 59601

Dear Governor Judge:

The enclosed proposal details the development of the Governor's Command Center. A facility which could greatly enhance the operational efficiency of State government in both daily and emergency situations.

The proposal was prepared in cooperation with the various concerned State agencies and your Office of Federal-State Coordinator.

All avenues of federal funding are being explored by Dean Hart who will, I'm sure, keep you advised on all developments.

Sincerely yours,

Doyle B. Saxby

Doyle B. Saxby, Director

Curt Wheeling

Curt Wheeling, Administrator
Communications Division

DBS/cap

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A PROPOSAL FOR THE DEVELOPMENT
OF THE
GOVERNOR'S COMMAND CENTER

PREFACE

This proposal was prepared in cooperation with the Office of the Governor, Department of Military Affairs, Office of Civil Defense, the various State agencies involved in the operation of the Governor's Command Center, the Department of the Army and the Defense Civil Preparedness Agency.

TABLE OF CONTENTS

Introduction ... iv

1.00 The Governor's Command Center ... 1
  1.10 Location ... 1

2.00 Operational Areas ... 4
  2.10 Briefing Area ... 4
  2.20 Communications Area ... 6
  2.30 Data Entry/Validate Area ... 6
  2.40 Operations and Mapping Area ... 7
  2.50 Work Area ... 8
  2.60 Other Areas ... 8

3.00 Command Systems ... 8
  3.10 Closed Circuit Television System ... 9
    3.11 Control Component ... 9
    3.12 Briefing Component ... 9
    3.13 Security Component ... 11
  3.20 Radio Communications System ... 11
  3.30 Resource Data System ... 14
  3.40 Telephone/Intercom System ... 16
  3.50 Security System ... 18

4.00 Project Costs ... 19

5.00 Continuing Costs ... 25

Glossary ... 27

Appendix I - Architect's Drawing of GCC ... 28
Appendix II - Floor Plan of GCC ... 29
Appendix III - Shelter Survey Data ... 30

FIGURES

1 GCC Organizational Chart 2
2 Architect's Drawing of GCC 3
3 Floor Plan of GCC 5
4 Closed Circuit Television System 10
5 Radio Frequencies Installed within GCC 12
6 Radio Communications System 13
7 Resource Data System 15
8 State Telephone System 17

TABLES

1 Project Cost Summary 19
2 Cost Estimate - General Construction 20
3 Cost Estimate - Closed Circuit Television System 21
4 Cost Estimate - Radio Communications System 22
5 Cost Estimate - Resource Data System 23
6 Cost Estimate - Telephone/Intercom System 24
7 Cost Estimate - Security System 24
8 GCC First Year Operational Budget 26
9 Existing Operational Budgets 26

INTRODUCTION

During the summer of 1973, a state of emergency was declared as Montanans witnessed the loss of over 106,000 acres of prime forest land to more than 1,600 forest fires. Many homes and families were evacuated as the fires threatened seven mountain communities. State and Federal fire units and local public-safety agencies worked around-the-clock as the fires burned out of control.

Lack of adequate moisture not only fanned the forest fires, but also crippled our agricultural communities with severe drought. As a result, twenty-two counties were declared disaster areas requiring State and Federal assistance.

Because of the unusually dry summer, the soil was not prepared for the heavy, early winter snowfalls. As temperatures warmed and snow turned to rain, the flooding began. At least ten communities experienced heavy flood damage; and again, seven counties were declared disaster areas. Although flood damage was extensive in 1973-74, it did not compare with the devastation and loss of life caused by the flooding in 1964.

These instances are only a few of the many natural and man made disasters Montana has endured. In each of these cases one clear fact remains the same. A central operations and command center, designed for immediate collection of information, complete efficiency in decision making, and the rapid dispatch of available emergency resources, *is an undeniable necessity.*

However, elaborate and expensive command centers cannot be built and economically justified only to "wait for disasters." In order to accomplish a rapid transition from routine activities to emergency situations, the day-to-day functions of primary State agencies must be incorporated into the overall operation of a command center.

This proposal will detail the development of such a facility — *The Governor's Command Center.*

1.00 THE GOVERNOR'S COMMAND CENTER

Throughout the following pages many references will be made to *maximum efficiency, maximum coordination* and *maximum utilization.* These are the guidelines chosen for the development of the Governor's Command Center. In the response to any emergency, whether localized or wide-spread, a unified effort by all agencies concerned is the only effective way to speed assistance to those in need. Pluralistic responses to a worsening situation can result in unnecessary loss of property, natural resources and even human life.

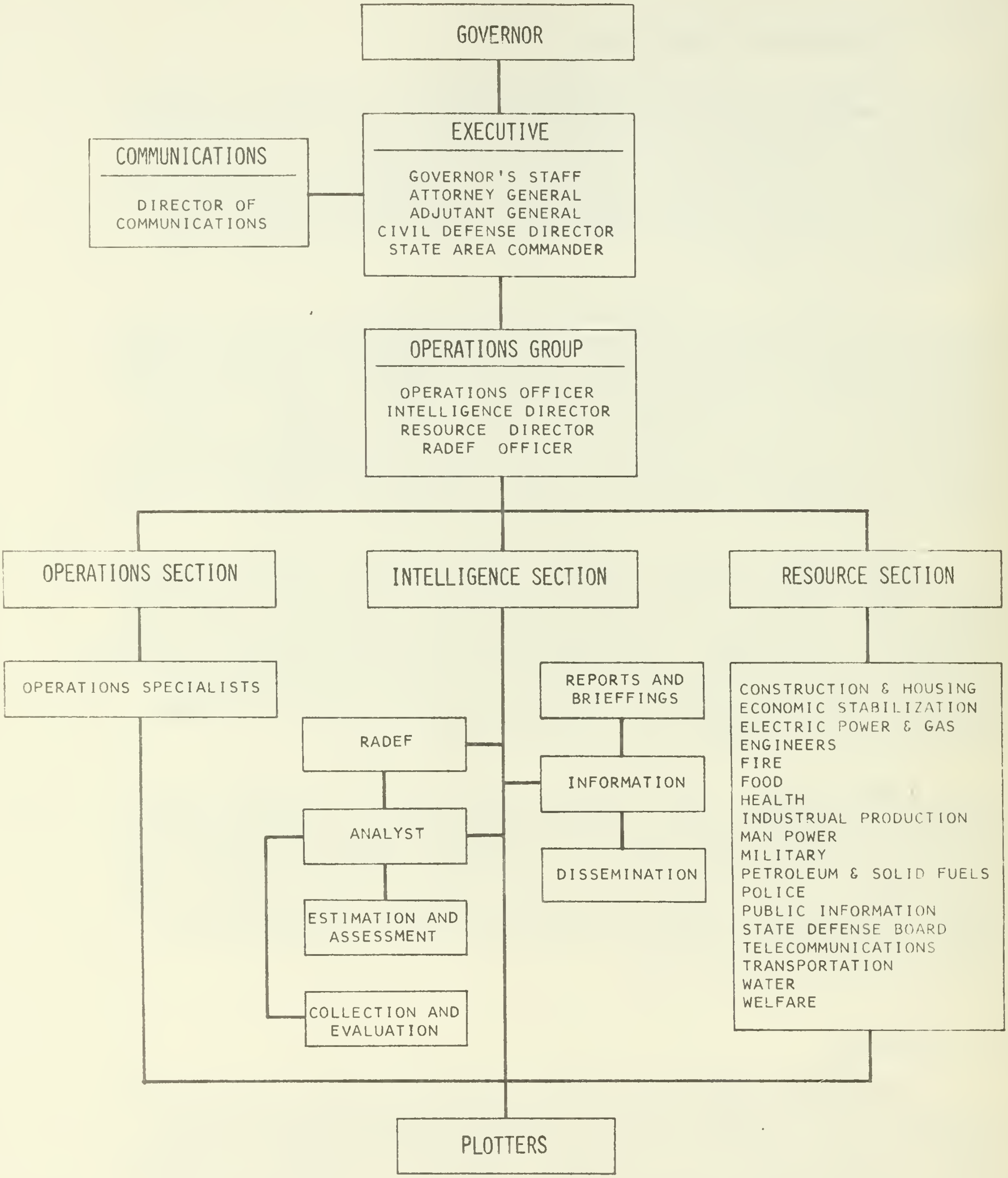
An operations and command center must be designed to form an integrated, powerful tool to all agencies during their day-to-day activities and especially during the intensified management situations brought about by emergencies. Those who make the command decisions must thoroughly understand the situation, be aware of all possible alternatives and have at their finger-tips the necessary means to dispatch the proper resources. For the first time in Montana, the Governor's Command Center (GCC) will provide a focal point for coordination of all State activities during emergency situations and act as a complement to the routine activities of many State agencies.

Many specialized systems exist within State Government concerning public welfare and safety. Effective means to unite these systems do not now exist. Communications systems of State, county and city agencies operate independently without dedicated means of interconnection. The actions of one agency could adversely affect those of another, and yet the resources of those agencies could complement one another. Whenever needed, the capabilities will exist within the GCC to quickly unit Federal, State, county and city agencies into an integrated response team.

Organization and standard operating procedures are two key elements in the operation of any command center. The GCC will be organized as shown in Figure 1. You will note that this figure indicates a full emergency organizational structure. Depending upon the severity of any given situation, certain components of the GCC may not be utilized; however, the basic structure will not change. Standard operating procedures will be designed to fulfill the requirements of the GCC and also the Civil Defense Emergency Operating Centers.

1.10 LOCATION

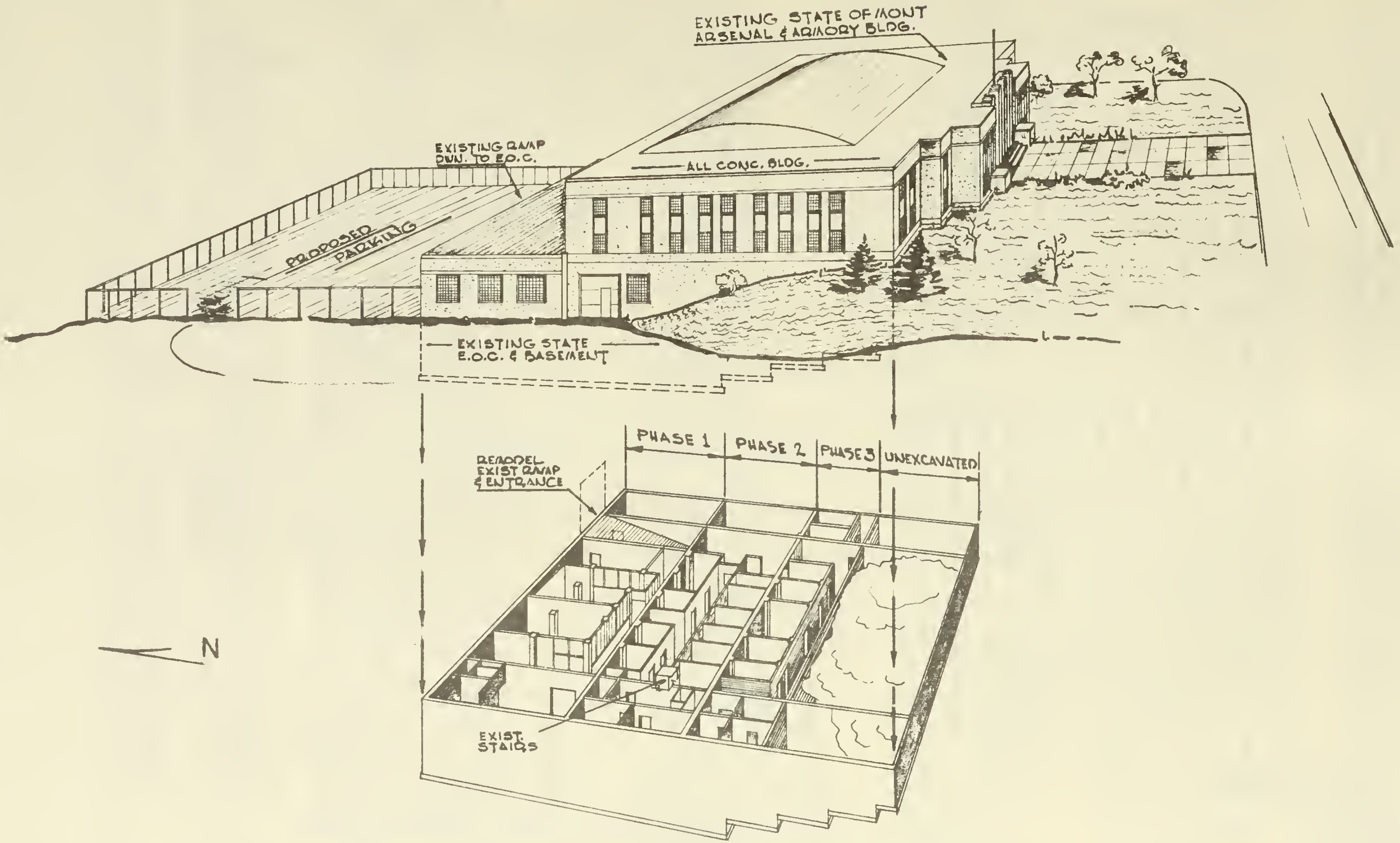
The proposed location of the Governor's Command Center is the sub-basement of the State Armory Building, 1100 North Main Street, Helena, Montana (latitude: N 46° 35′ 57″, longitude: W 112° 02′ 10″). An architect's drawing of the proposed facility is presented in Figure 2, and enlarged in Appendix I. The Armory Building was completed in 1940 and constructed entirely of concrete, with all walls over 10 inches thick. Shelter survey data and protection-factor information are presented in Appendix III.



GOVERNOR'S COMMAND CENTER
FULL EMERGENCY ORGANIZATIONAL CHART

NOTE: THIS IS A FULL EMERGENCY ORGANIZATIONAL CHART. DEPENDING UPON SEVERITY OF SITUATION, SOME ELEMENTS MAY NOT BE UTILIZED; HOWEVER, BASIC ORGANIZATION WOULD NOT CHANGE.

FIGURE 1


EXISTING STATE OF MONT ARSENAL & ARMORY BLDG.
EXISTING RAMP DWN. TO E.O.C.
ALL CONC. BLDG.
PROPOSED PARKING
EXISTING STATE E.O.C. & BASEMENT
PHASE 1
PHASE 2
PHASE 3
UNEXCAVATED
REMODEL EXIST RAMP & ENTRANCE
EXIST. STAIRS
N

THE GOVERNOR'S COMMAND CENTER

SUB BASEMENT LEVEL, STATE ARMORY BUILDING, HELENA, MONTANA
LATITUDE: N 46°35'57" LONGITUDE: W 112°02'10"

FIGURE 2

The Armory consists of two floors, a basement and sub-basement. The upper two floors presently house Department of Military Affair's personnel and offices. The basement contains garage and storage space, while the sub-basement currently houses the offices of the State Civil Defense and a partially completed Emergency Operating Center (EOC).

The entire sub-basement will be designated as the Governor's Command Center. As can be seen in the preliminary floor plan presented in Figure 3 (enlarged in Appendix II), the Phase 1 development area is the primary operational area of the GCC. The area designated as Phase 2 will provide office space for Civil Defense and Communications personnel on a day-to-day basis, and additional office space and work areas for key State and Military personnel when it becomes necessary to relocate to the GCC. The Phase 3 area will provide additional office space, sleeping and lavatory facilities for GCC personnel.

Currently the area designated as Phase 1 houses a partially completed EOC. This proposal primarily details the improvement and remodeling of the Phase 1 area and the various command systems to be installed within this area. Construction and remodeling estimates are also provided for the Phase 2 and Phase 3 areas. Since the Phase 1, 2 and 3 areas will play an integral role in the operation of the GCC, it is proposed that all three phases be considered a single step in the development of the GCC.

2.00 OPERATIONAL AREAS

The Phase 1 area, (see Figure 3), can be divided into five major operational components; The Briefing Area, Communications Area, Data Entry/Validate Area, Operations and Mapping Area and the Work Areas. Sections 2.10 through 2.60 provide descriptions of each area and how their individual functions integrate into the overall operation of the GCC.

2.10 BRIEFING AREA

Serving as the focal point for decision making, the Briefing Area will be designed to accomodate approximately thirty-five personnel for closed briefings. The Briefing Area will provide the briefer maximum latitude and professionalism in all situation briefings. Rear screen film, slide and television projectors will be located in the far northwest corner, with a five foot by seven foot screen on the diagonal wall across the corner. The briefer will remotely control all film or slide presentations and be in direct two-way contact (head sets) with the Operations and Mapping Area camera operator.

The Center's closed circuit television system is designed to directly link the Operations and Mapping Area to the Briefing Area (see section 3.10). The rear screen color video projector will enable full viewing capability by all those seated within the area.

Ceiling-mounted microphones and a stationary video camera mounted near the center of the Briefing Area will televise and record, via the video control console, all

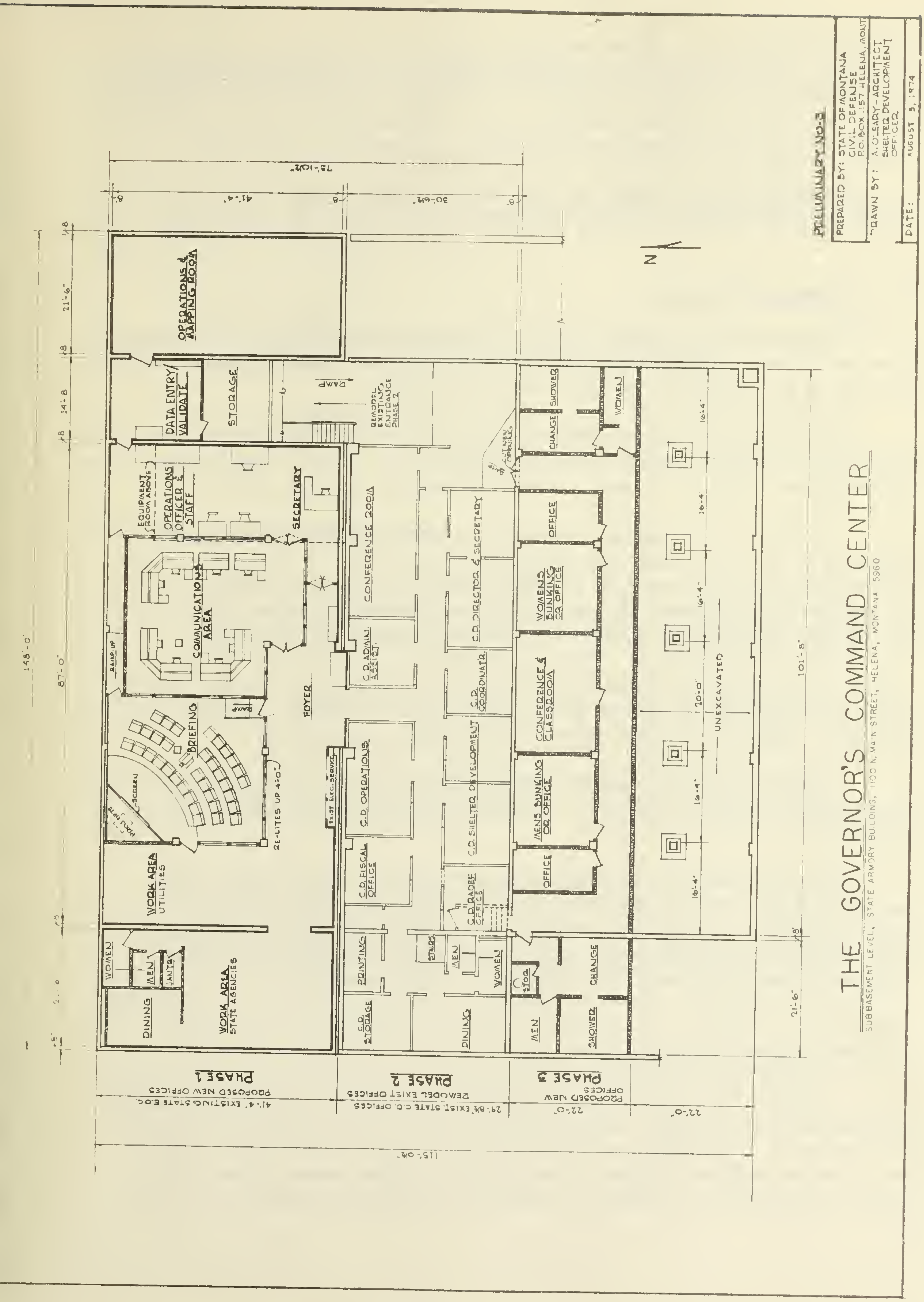

THE GOVERNOR'S COMMAND CENTER
SUBBASEMENT LEVEL, STATE ARMORY BUILDING, 1100 N. MAIN STREET, HELENA, MONTANA 5960
PRELIMINARY NO-3
PREPARED BY: STATE OF MONTANA CIVIL DEFENSE P.O. BOX 1157 HELENA, MONT.
DRAWN BY: A. OLEARY - ARCHITECT SHELTER DEVELOPMENT OFFICER
DATE: AUGUST 5, 1974
N
OPERATIONS & MAPPING ROOM
DATA ENTRY VALIDATE
STORAGE
RAMP
REMODEL EXISTING ENTRANCE PHASE 2
EQUIPMENT ROOM ABOVE
OPERATIONS OFFICER & STAFF
SECRETARY
COMMUNICATIONS AREA
CONFERENCE ROOM
C.D. DIRECTOR & SECRETARY
C.D. ADMIN. ASSIST.
C.D. COORDINATR.
FOYER
RAMP UP
BRIEFING
SCREEN
PODIUM
STEPS
RE-LITES UP 4'-0"
EXIST. ELEC. SERVICE
C.D. OPERATIONS
C.D. SHELTER DEVELOPMENT
C.D. FISCAL OFFICE
C.D. RADEF OFFICE
WORK AREA UTILITIES
WORK AREA STATE AGENCIES
WOMEN
MEN
JANITOR
DINING
PRINTING
STAIRS
MEN
WOMEN
C.D. STORAGE
DINING
STOR.
MEN
SHOWER
CHANGE
CUT NEW OPENINGS
CHANGE
SHOWER
WOMEN
OFFICE
WOMENS BUNKING OR OFFICE
CONFERENCE & CLASSROOM
MENS BUNKING OR OFFICE
OFFICE
UNEXCAVATED
PHASE 1
PROPOSED NEW OFFICES
41'-4" EXISTING STATE E.O.C.
PHASE 2
REMODEL EXIST OFFICES
29'-8¾" EXIST. STATE C.D. OFFICES
PHASE 3
PROPOSED NEW OFFICES
22'-0"
22'-0"
115'-0½"
148'-0"
87'-0"
21'-6"
14'-8"
1'-8
75'-10½"
41'-4"
30'-6½"
.8
101'-8"
16'-4"
16'-4"
16'-4"
20'-0"
16'-4"
16'-4"
21'-6"

FIGURE 3

briefings and presentations. Entire briefings can either be video taped and played back at any time, or transmitted live to other GCC monitors or to monitors located within the Governor's briefing area in the Capitol. The one-way video and two-way audio link between the GCC and the State Capitol will ensure complete and immediate briefing of the Governor and other key State officials without relocating them to the Center.

Information stored within the Resource Data System (section 3.30) will be accessed by a CRT terminal and hard copy printer located within the Briefing Area.

2.20 COMMUNICATIONS AREA

Adjacent to the Briefing Area, the Communications Area will serve as the dispatch center for all radio communications systems of State agencies. Telephone operators and the video control console will also be located within this area.

Glass re-lites will surround the Communications area on three sides giving visual access from the Briefing Area and Data Entry/Validate Area. Physical access to the Communications Area will be limited to authorized personnel (see section 3.50).

Initially, six (6) integrated communications control consoles will be installed for dispatching of the various State radio systems (see section 3.20). A two-position console will be provided for the Department of Justice, while single position consoles will serve the Department's of Highways, Natural Resources and Conservation, Military Affairs and Civil Defense. Space will be available for additional consoles if the need arises.

The video control console will house all control functions for the GCC closed circuit television system (see section 3.11). Video security monitoring of both the GCC and Capitol Complex can be accomplished from the video control console.

Several closed circuit television monitors will be installed within this area to provide situation reports and briefings to dispatchers without having to relocate them to the Briefing Area (see section 3.12).

The Communications Area will be staffed twenty-four hours a day for those agencies requiring continuous radio dispatching (i.e. Montana Highway Patrol). Also, the security function of the video control console will be operational twenty-four hours a day. All other communications and radio dispatching can be handled by agency personnel during the working hours of that agency, or whenever necessary.

2.30 DATA ENTRY/VALIDATE AREA

The Data Entry/Validate Area will serve as the information gathering and data processing center for the GCC. Cathode Ray Tube (CRT) terminals and hard copy printers connected to the Resource Data System (see section 3.30) will be located within the area, as well as teletypes interfacing to the State Civil Defense teletype system and the National Warning System. Interface to other State private line data systems such as the

Montana Law Enforcement Teletype System (MLETS) and the Highway teletype system will be provided at that agency's radio communications console within the Communications Area.

Incoming situation reports will be checked and verified with existing data before transferring to the Operations Officer and finally to the Operations and Mapping Area. Any conflicting data can be verified by units at the scene before updating situation reports. Status of emergency resources will be verified within the Data Entry/Validate Area before the Resource Data System is updated.

Outgoing information from the GCC will be coordinated between the Operations Officer and Data Entry/Validate Area personnel to ensure that no duplication of efforts arise or no duplicate entries are made into the Resource Data System.

Also, within this area, adequate storage space will be provided for hard copy documents which must be kept for a time in an active file before transferring to microfilm or microfiche.

2.40 OPERATIONS AND MAPPING AREA

The Operations and Mapping Area, situated in the east room of the GCC, will serve as the plotting area for all activities of the Center. Large scale maps of the State, region, and local areas will be mounted on the perimeter walls and arranged to provide the plotters maximum flexibility in all displays. This area will be designed so that the latest graphic and plotting techniques may be utilized for all situation plots. A standard system of maps and reference charts will be implemented on a statewide basis.

The Closed Circuit Television (CCTV) system will directly inter-connect the Operations and Mapping Area to the Briefing Area (see section 3.10). Color video cameras will permit multi-color plotting techniques to be utilized within this area, thereby increasing the latitude of the plotters.

The Operations and Mapping Area video camera will be mounted on a tripod dolly, easily moved to focus the camera on all or portions of any map or graph within the area. Presentations can be directly switched, via the video control console, to the color rear screen video projector in the Briefing Area or video taped at the console. With the CCTV System, maps and plots need not be moved into the Briefing Area or personnel need not relocate to the plotting area to view maps. Presentations can be arranged prior to a briefing to make the briefings more efficient and less time consuming. The Operations and Mapping Area camera operator will be in direct two-way contact (head sets) with the briefer. The briefer can then direct all presentations originating from the Operations and Mapping Area.

2.50 WORK AREA

Ample working space will be provided within the Work Area for all State personnel when it becomes necessary to relocate to the GCC. The areas designated as "Work Area - State Agencies" and "Work Area - Utilities" (see Figure 3) will accomodate desks and other office equipment for each component of the Resource Section detailed in Figure 1. Also, space will be available within these areas for any additional agencies or personnel who may be relocated to the GCC.

Other office space normally used during day-to-day operations by Civil Defense and Communications personnel will be reassigned as office space to key State and Military personnel if relocated to the GCC.

The area designated as the "Foyer" in Figure 3 will be used to provide security and controlled access to the operational areas of the GCC.

2.60 OTHER AREAS

Serving as one of the key personnel in the emergency operation of the GCC, the Operations Officer and his staff will be located in the area designated adjacent to the Communications Area.

An air conditioned equipment room will be located on the basement level directly above the Data Entry/Validate Area. All two-way radio base stations and other communications equipment which can be remotely controlled, plus the data processor and disk memory unit, will be located in the equipment area.

In addition to the operational and working areas of the GCC, two small dining areas are proposed for personnel within the Center. Storage and refrigeration will provide a minimum of two-weeks supply of food for GCC personnel.

Lavatory and shower facilities will be provided to accomodate all personnel working within the GCC. Sleeping quarters, which can be used as additional offices when not required, will accomodate approximately thirty personnel during long-term operation of the GCC.

3.00 COMMAND SYSTEMS

Within the Governor's Command Center, five major electronic command systems will be installed to unite the various operational areas into a coordinated and efficient response mechanism. These individual command systems are the Closed Circuit Television System, the Radio Communications System, the Resource Data System, the Telephone/Intercom System and the Security System. These systems and their operation as an integral part of the GCC are explained in the following sections.

3.10 CLOSED CIRCUIT TELEVISION SYSTEM

The GCC will be equipped with a Closed Circuit Television (CCTV) System as shown in Figure 4. The CCTV System can be separated into three distinct components for explanation: the control component, briefing component and security component.

3.11 CONTROL COMPONENT

The video control console, located in the communications area, will provide all the necessary video and audio switching, monitoring and video-taping facilities for the system. Nine-inch black and white monitors will be provided for security cameras, while three (3) fourteen-inch color monitors will be utilized for the color cameras and color video tape unit.

Two Video Tape Recorders (VTR) will be installed within the console. A standard black and white VTR will be utilized primarily for recording security activity; a color VTR with editing capability will be used to record all briefings or presentations from either the Briefing Area or the Operations and Mapping Area. Video tape sizes and drives will be the same for both VTR's.

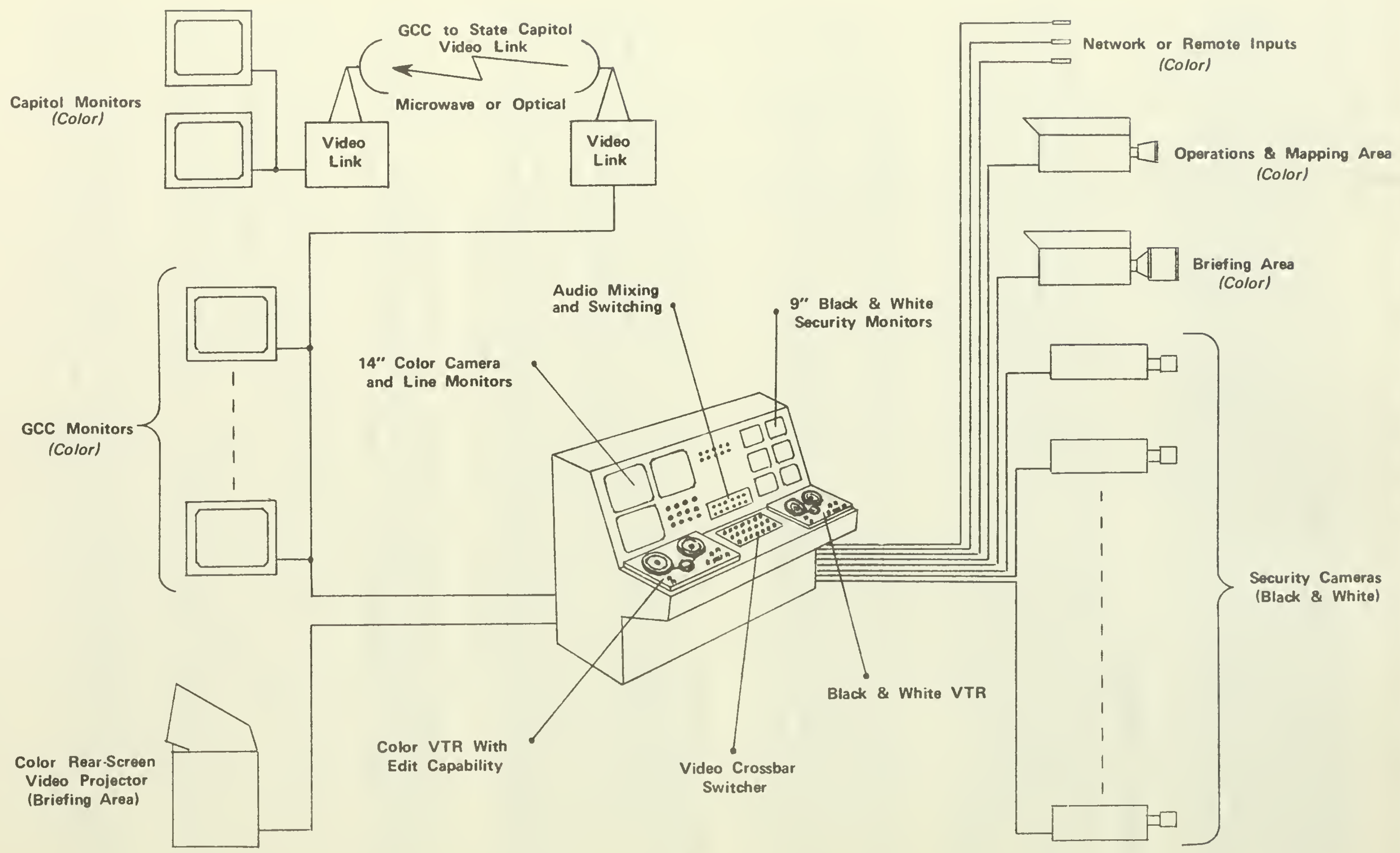
3.12 BRIEFING COMPONENT

Two non-broadcast quality color cameras are proposed for the CCTV system. One color camera will be located within the Operations and Mapping Area on a tripod dolly capable of focusing on any map or chart within the area. The other color camera will be located in the Briefing Area on a stationary mount. The Briefing Area camera will be equipped with remotely controlled pan, tilt and zoom lens features. Controls for the Briefing Area camera will be located at the video control console.

A color system for the briefing component was chosen to provide maximum latitude in all plotting techniques used within the Operations and Mapping Area, and to ensure professionalism in all presentations recorded within the Briefing Area.

The Operations and Mapping Area color camera can be directly coupled, via the control console, to the color rear screen video projector located within the Briefing Area. The briefer will be in direct contact with the camera operator in the Operations and Mapping Area through a head-set intercom system. The briefer can then direct the displays he wishes to present during his briefing. As mentioned in section 2.10, rear screen film and slide projectors will also be provided in the Briefing Area.

The Briefing Area camera and color VTR will record all activities within the area. Entire briefings can be video taped and played back at any time to ensure complete briefing of all personnel.



GOVERNOR'S COMMAND CENTER
CLOSED CIRCUIT TELEVISION SYSTEM

FIGURE 4

The CCTV system will be extended to the Governor's briefing area within the State Capitol via a microwave or optical video link. The Governor will then retain the full capabilities of the GCC even when he does not relocate to the Center. Associated with this one-way video link will be a two-way audio path so that the Governor, or other key personnel, may question the briefer or address those assembled in the Briefing Area.

3.13 SECURITY COMPONENT

The exact locations of the black and white security cameras have not yet been determined. The video control console will be designed as flexible as possible to permit connection. of all necessary security cameras within the GCC and within the State Capitol Complex. Security cameras will either be terminated in an individual nine-inch monitor or terminated in an automatic sequential video switcher utilizing only one monitor.

Since the Communications Area will be staffed 24 hours a day, personnel will be available to monitor all security activity not only for the GCC but also the Capitol Complex. Direct radio contact will be maintained between the GCC and the Capitol security personnel.

3.20 RADIO COMMUNICATIONS SYSTEM

A total radio communications capability will enable State agency personnel within the GCC to coordinate and dispatch not only all emergency activity, but also the day-to-day activities of their agencies. The radio communications system will consist of a battery of two-way radio base stations and the latest integrated communications control consoles.

Existing radio base stations will be relocated to the equipment room whenever possible; however, much of the present equipment is nearing obsolesence. Monitor receivers will be installed for intergovernmental coordination between State, city, county and Federal, units. Capabilities will also exist at the GCC for direct interconnection to the State's proposed microwave system.

The communications control consoles will be located within the Communications Area. Each console will be equipped with all necessary base station and remote control features for all frequencies utilized by that particular agency (see Figure 5). Each console will be designed to integrate with all other consoles to form a coordinated communications system. Initially, six (6) consoles will be provided for the Departments of Justice, Highways, Natural Resources and Conservation, Military Affairs and Division of Civil Defense. A two-position console is envisioned for the Department of Justice which will handle all law enforcement interfaces, while single position consoles will be provided for the other agencies. A basic agency radio communications system and single position console is presented in Figure 6.

FREQUENCIES INSTALLED WITHIN THE GCC

(All Frequencies In MHz)

DEPARTMENT OF JUSTICE
(Two Position Console)

39.94
39.92
39.90
39.88
39.86
39.84
39.82
39.78
39.76
39.72
39.56/39.96
154.920/159.150

DEPARTMENT OF HIGHWAYS
(Single Position Console)

47.04
47.08
47.10
47.16
157.05/72.66

DEPARTMENT OF NATURAL RESOURCES
(Single Position Console)

151.475
151.220
151.175
159.405

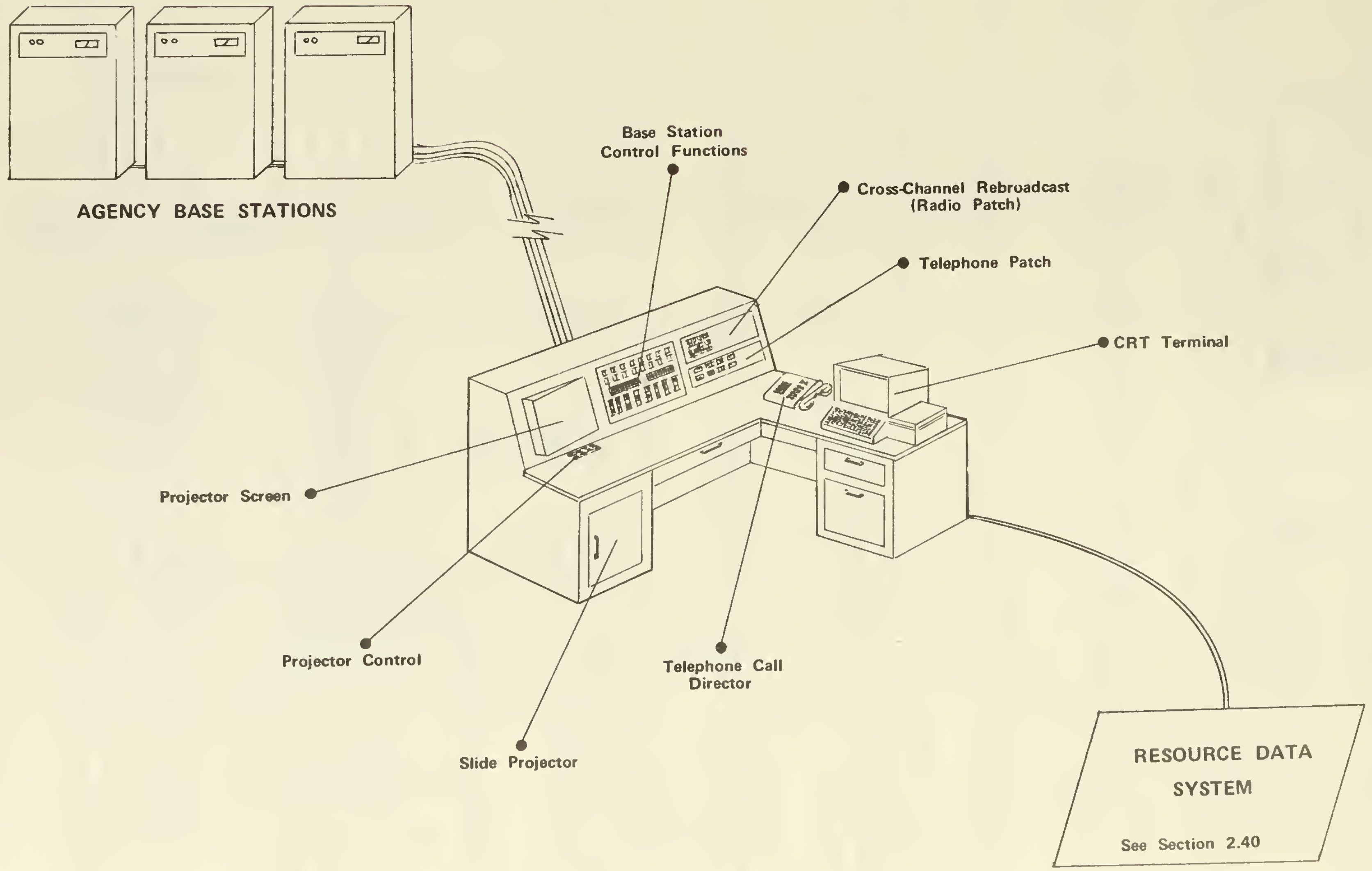
DIVISION OF CIVIL DEFENSE
(Single Position Console)

39.98
39.82
47.80
73.48
104.93
146.94
146.88
146.82
146.70
161.70
7.2485 (SSB)
3.9965 (SSB)
1.9910 (SSB)
155.280
155.340

DEPARTMENT OF MILITARY AFFAIRS
(Single Position Console)

80.60
80.40
49.60
40.35
(Plus all other necessary military frequencies)

FIGURE 5



GOVERNOR'S COMMAND CENTER
RADIO COMMUNICATIONS SYSTEM
(Single Position Console)

FIGURE 6

Each console will be equipped with a "cross-channel rebroadcast" feature which will enable direct and automatic connection of two different channels at the GCC. For example, a Montana Highway Patrol mobile operating on 39.92 MHz can request a "patch" through the GCC and communicate directly with a Forestry mobile operating on 155.475 MHz.

Each console will be equipped with a randomly accessible slide projector located in the lower pedastel. Rear screen projection will be used to display a minimum of 80 slides to a screen designed into the upper turret of the console. Slides will be chosen by each agency to fit their particular needs.

Each console will be equpped with telephone patch equipment providing a direct interface between all channels controlled within the Communications Area and the Telephone/ Intercom System.

A twenty (20) channel audio tape recorder will be installed in the Communications Area to automatically record all incoming and outgoing radio traffic.

Each console will be provided a CRT terminal and hard copy printer connected to the Resource Data System (see section 3.30). Teletypes will also be provided for the Department of Justice and Department of Highways for interconnection to the Montana Law Enforcement Teletype System and the Highway teletype system.

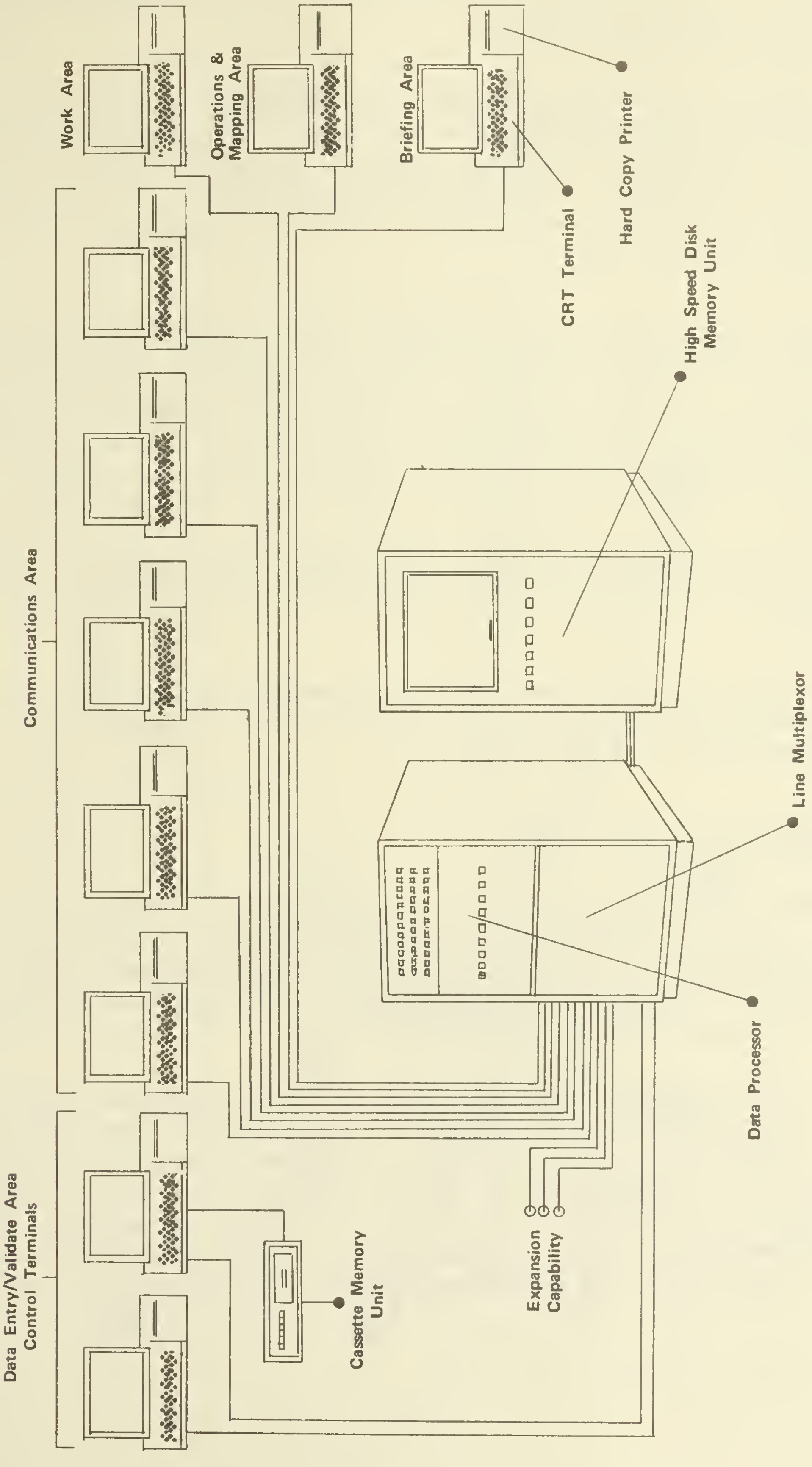
Remote contol of the radio base stations can be provided directly to the offices of a particular agency; however, priority control of all frequencies will remain at the consoles within the GCC.

In addition to the two-way radio capabilities of the GCC, a one-way FM radio paging system will be installed. Key State and Military personnel will be provided pocket-size units. Coverage of the paging system will extend throughout the entire Helena area so that all personnel can be immediately notified of all emergency situations.

3.30 RESOURCE DATA SYSTEM

The Resource Data System will be designed to provide GCC personnel with immediate information on the status, location and description of all emergency resources throughout the State. The requirement for reliable and continually up-dated reports, the tremendous volume of information to be filed and rapidly accessed, and the precision that must be guaranteed, necessitate the use of a small data processor and high speed disk memory (see figure 7).

After preliminary analysis of such a data system, it is proposed that the State be divided into sectors, each of equal size (i.e. ten miles square). All categories of emergency resources will be defined. These catagories will include all possible Federal, State, county, city and private emergency resources; such as hospital facilities, ambulance services, fire units, road and weather agencies, law enforcement units, military support, etc. Under



GOVERNOR'S COMMAND CENTER
RESOURCE DATA SYSTEM

FIGURE 7

each category, individual services will be defined as well as the current status, description, location, telephone numbers, quantities, capabilities, etc. All sub-category information can be continually up-dated to ensure that only the most current information is used in the decision making process within the GCC.

Software within the data processor will contain search and recall routines using high density disk storage techniques. Once an inquiry is made, giving the sector identifier and category or categories of information desired, the processor will search the disk memory for the requested information. If no available emergency resources are found within the specified sector and category, the processor will then search all surrounding sectors until the closest available resource is located.

Cathode Ray Tube (CRT) terminals with hard copy printers will interface to the processor to access the data base information. CRT terminals and printers will be located within the Communications Area, Briefing Area, Operations and Mapping Area, Work Area, and the Data Entry/Validate Area. All terminals will be able to access information stored within the data base. However, only the control terminals within the Data Entry/Validate Area will have the capability to update the resource information. One of the control terminals will be equipped with a cassette magnetic tape data storage unit.

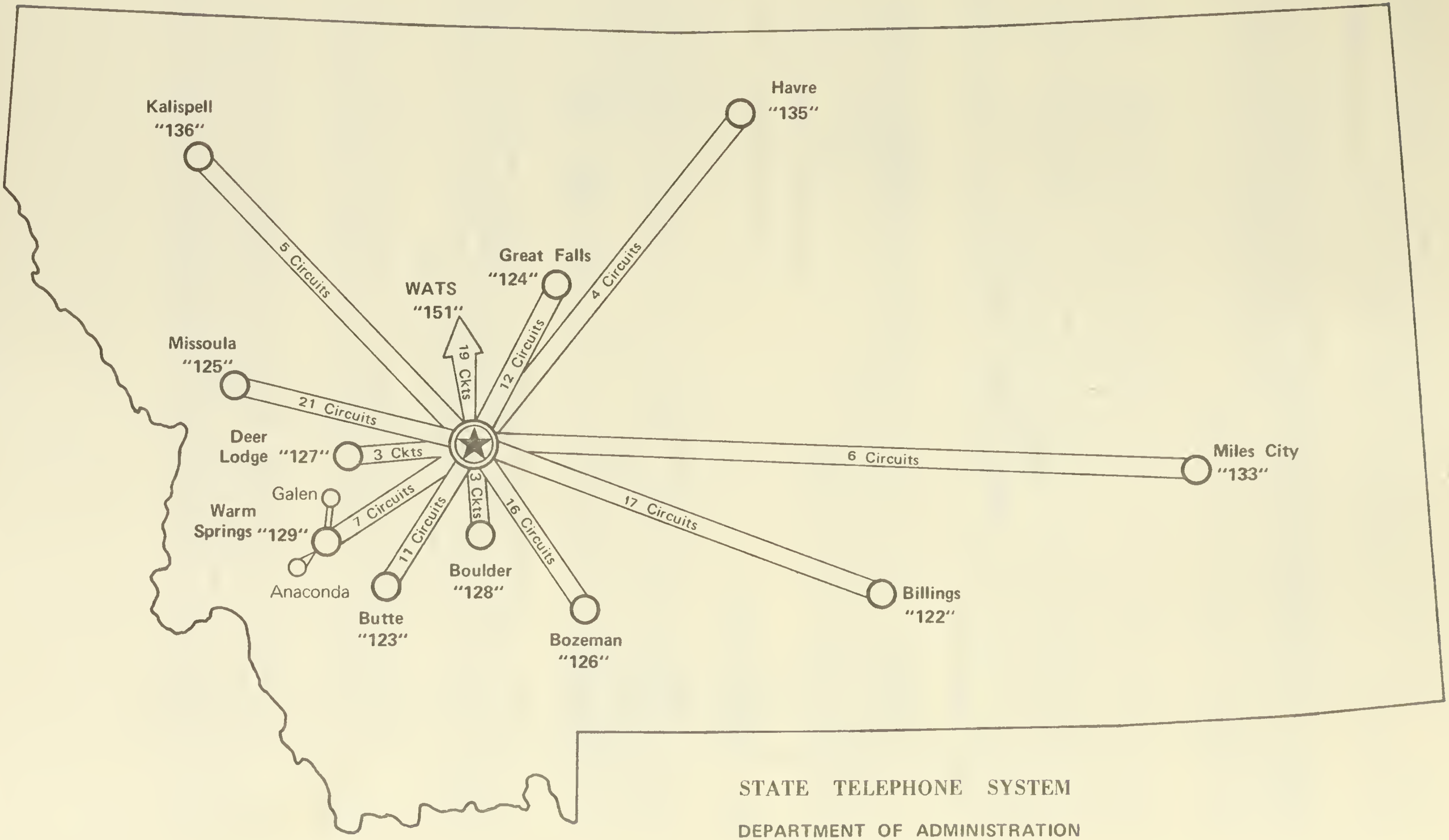
The line multiplexor unit will provide adequate interface capability permitting addition of more CRT terminals or interconnection of remote data lines to Civil Defense District EOC's.

The GCC will be provided with an ample emergency power supply. But in order to ensure that no data is lost or disrupted, the processor and disk memory units will be installed with a power-fail option.

3.40 TELEPHONE/INTERCOM SYSTEM

Basic to daily and emergency operation of the Governor's Command Center is an integrated telephone system capable of direct intercity, interdepartmental, intercom and conference communications. The GCC will be equipped with an Electronic Private Automatic Branch Exchange (EPABX) which will contain a number of optional features designed to maximize the operational efficiency of the Center.

Intercity telephone services are provided by the State Telephone System (STS); a private, tandem tie line network supplemented by intrastate WATS and switched from centralized equipment in Helena (see Figure 8). A sufficient number of local trunks will directly connect the EPABX to the STS switching facility. During emergency situations, STS operators may assist in dialing, or any number of STS circuits may be dedicated to the GCC. Personnel within the Center will access the STS through the EPABX by dialing a single digit. Once the STS has been accessed, existing dialing procedures will remain the same.



STATE TELEPHONE SYSTEM

DEPARTMENT OF ADMINISTRATION
COMMUNICATIONS BUREAU
JUNE, 1974

FIGURE 8

All incoming calls will be controlled and processed by the Center's telephone operator. The operator's console will be equipped with station call transfer, consultation hold, attendant control conference and a station busy lamp field.

Interdepartmental telephone communications will be channeled on an adequate number of circuits interconnecting the EPABX to the Capitol CENTREX. A single digit, recognizable by the EPABX, switches the caller into the Capitol CENTREX system. A subsequent four digit sequence will select any Helena CENTREX station and an eight digit sequence will select any local number.

Intercom service of two varities will be installed within the GCC. A two digit, station-to-station intercom service will be a standard feature of the EPABX. Approximately twelve GCC intercom calls can be simultaneously switched without interference to intercity or interdepartmental calls. Also, personnel who are not permanently located in an area will be notified of incoming calls by a one-way loud speaker intercom system. The telephone operator's console will be configured so as to permit individual or collective area calling. The loud speaker intercom system may also be used to disseminate brief messages, progress reports, news casts, etc.

Conference service, which permits several stations to participate in a combined conversation, will be provided with the assistance of the Center's operator. The combination of the EPABX and the operator's console ensures that any type of circuit may be terminated or utilized within the GCC.

3.50 SECURITY SYSTEM

Access to the entire sub-basement level of the State Armory Building will be limited to authorized personnel only. Magnetic or coded-card lock systems will be employed at the basement level entrances to the GCC. A two-way voice intercom between the entrances and the telephone operator's console will be installed. Closed circuit television (CCTV) security cameras will also be used on the strategic and high-use entrances.

Access to operational areas of the GCC will be strictly controlled. The area designated as the "Foyer" in Figure 3 will serve as an additional security point during emergency operation of the GCC. Only those personnel designated in the organizational chart of Figure 1 will have access to the operational areas.

Remote alarm sensors will be installed at all basement level entrances and windows. Also, sensors will be installed on the towers and antenna systems located on the roof of the State Armory.

The facilities of the GCC can also be used to monitor the CCTV security cameras proposed for the State Capitol. Cameras can be remoted to the GCC via the proposed video link (a down-link will be required) and monitored at the video control console. Direct two-way radio contact will be maintained between the GCC and Capitol security personnel.

4.00 PROJECT COSTS

A summary of the estimated project costs for the development of the Governor's Command Center is presented in the table below. Detailed cost estimates for the individual items are presented in Tables 2 through 7.

PROJECT COST SUMMARY GOVERNOR'S COMMAND CENTER	
Preparation of Specifications — Consultant Fees and Publication	**20,000.00**
General Construction	**247,070.00**
Closed Circuit Television System	**78,100.00**
Radio Communications System	**154,875.00**
Resource Data System	**91,000.00**
Telephone/Intercom System	**23,944.00**
Security System	**7,500.00**
TOTAL PROJECT COST	622,489.00

TABLE 1

DETAILED COST ESTIMATE

GENERAL CONSTRUCTION

ITEM	PHASE 1	PHASE 2	PHASE 3	TOTAL
Demolition	500.00			500.00
Firring Concrete Walls	184.00			184.00
Wall Insulation	824.00			824.00
Sheet Rock Wall Cover	1,917.00			1,917.00
Wall Paneling	840.00			840.00
Trim and Moulding	611.00			611.00
Partitions	394.00		1,650.00	2,044.00
Glass Framing	218.00			218.00
½" Insulated Glass	2,398.00		208.00	2,606.00
Doors and Door Frames	1,798.00		2,975.00	4,773.00
Remodel Ext. Overhead Door		15,000.00		15,000.00
Hardware	1,904.00			1,904.00
Floor Repair and Base	1,195.00	1,500.00	4,997.00	7,692.00
Ramp Floor - Briefing	1,000.00			1,000.00
Seating - Briefing	1,500.00			1,500.00
Carpet	10,500.00	5,600.00		16,100.00
Rear Screen Projection - Briefing	1,125.00			1,125.00
Special Framing and Finish	4,000.00			4,000.00
Electrical Service Cabinet	600.00			600.00
Equipment Area	4,200.00			4,200.00
Kitchen Appliances	800.00	450.00		1,250.00
Kitchen Furniture	1,300.00	500.00		1,800.00
Suspended Ceiling System	2,400.00		1,385.00	3,785.00
Ceiling Tile	4,200.00		2,215.00	6,415.00
Painting — 3 Coats	1,590.00	2,080.00	1,200.00	4,870.00
Excavation & Gravel Fill			2,500.00	2,500.00
Concrete Slab & Block			6,500.00	6,500.00
Steel Framing			400.00	400.00
Parking Lot			3,930.00	3,930.00
Contingencies	4,000.00	1,000.00	2,000.00	7,000.00
TOTAL	49,998.00	26,130.00	29,960.00	106,088.00
Contractor: Profit, Overhead, Ins.	8,500.00	4,442.00	5,093.00	18,035.00
TOTAL (General Construction)	58,498.00	30,572.00	35,053.00	124,123.00
Mechanical: Plumb, Heat, Air	36,000.00	17,000.00	17,440.00	70,440.00
Electrical	23,562.00	1,000.00	3,460.00	28,022.00
TOTAL JOB	118,060.00	48,572.00	55,953.00	222,585.00
Architect/Engineer Fees	12,987.00	5,343.00	6,155.00	24,485.00
TOTAL COST	131,047.00	53,915.00	62,108.00	247,070.00

TABLE 2

DETAILED COST ESTIMATE

CLOSED CIRCUIT TELEVISION SYSTEM

One (1) video control console, audio & video switching	8,700.00
Three (3) console color monitors (14")	1,050.00
Six (6) console B & W monitors	1,500.00
One (1) color VTR with edit	3,000.00
One (1) B & W VTR standard	2,000.00
Two (2) non broadcast quality color TV cameras, tripods	18,000.00
One (1) remote control pan, tilt drive	500.00
One (1) remote control zoom lens	2,800.00
One (1) rear screen color video projector	6,900.00
Rear screen film and slide projectors	1,400.00
Ten (10) 18" color monitors	4,000.00
Video link to State Capitol	11,000.00
Security B & W video cameras	8,250.00
Installation & cabling	9,000.00
TOTAL COST	78,100.00

TABLE 3

DETAILED COST ESTIMATE

RADIO COMMUNICATIONS SYSTEM

Four (4) comm. control consoles with extension cabinets, working area, upper turret and all electronic functions installed	50,000.00
Installation	4,000.00
Two (2) comm. control consoles equipped for 2 position operation, extension cabinets, working area, upper turret and all electronic functions	30,000.00
Installation	2,000.00
Six (6) slide projectors and access controls, rear screen mirrors and screens	9,000.00
Installation	1,200.00
One (1) twenty channel audio tape recorder	8,000.00
Installation	1,500.00
Base station equipment, antennas and cabling	40,000.00
Installation	3,500.00
Radio paging equipment	5,475.00
Installation	200.00
TOTAL COST	154,875.00

TABLE 4

DETAILED COST ESTIMATE

RESOURCE DATA SYSTEM

One (1) data processor with I/O interface, CRT drives	10,000.00
One (1) line multiplexor, 20 line capability	7,000.00
One (1) high speed disk memory & drive, 5M storage	11,000.00
Ten (10) CRT terminals with hard copy printers	40,000.00
Two (2) ASR 33 teletypes	3,000.00
Software (adapt existing programs)	10,000.00
Cabling	2,000.00
Installation and checkout	8,000.00
TOTAL COST	91,000.00

TABLE 5

DETAILED COST ESTIMATE

TELEPHONE/INTERCOM SYSTEM

One (1) electronic PABX with 50 station lines, 20 local trunks, 12 intercom lines operator's console	13,000.00
Key systems features equipment	5,000.00
Forty (40) telephone instruments and equipment	3,000.00
Speaker intercom system	800.00
Installation	2,144.00
TOTAL COST	23,944.00

TABLE 6

DETAILED COST ESTIMATE

SECURITY SYSTEM

Four (4) magnetic or coded card door locks	2,600.00
Installation	500.00
Fourty (40) magnetic or coded access cards	400.00
Remote alarm system	3,000.00
Installation	1,000.00
TOTAL COST	7,500.00

TABLE 7

4.10 CONTINUING COSTS

The estimated yearly operational costs for the Governor's Command Center are presented in Table 8. As with any new installation, or new system providing new services, an increase in operational expenses can be expected. The capabilities and potentials of the Governor's Command Center to effectively serve the needs of the State and her people will more than offset the increase in yearly costs.

Table 8 presents an estimate of the overall operational costs of the GCC. Portions of several existing budgets are devoted to personnel and services which could be provided by the GCC. Table 9 presents an estimate of current expenditures for these services. The estimated actual increase in yearly costs to the State is the difference between the totals of Tables 8 and 9, or $66,900.00.

Full emergency staffing of the GCC would be absorbed in the budgets of the agencies involved. In addition, some of the activities and costs incurred by the GCC will be absorbed in the budgets of Civil Defense and Communications.

GOVERNOR'S COMMAND CENTER ESTIMATED OPERATIONAL BUDGET
FIRST YEAR AFTER COMPLETION

Personnel	
Salaries	
Radio Dispatchers, 7 FTE	52,500.00
Security Personnel, 3 FTE	18,000.00
Operational Personnel, 1 FTE	7,500.00
Benefits	10,000.00
Sub-Total	88,000.00
Operational	
Contracted Services	1,000.00
Supplies and Materials	8,000.00
Communications	3,600.00
Travel	1,000.00
Utilities	5,000.00
Repairs and Maintenance	15,000.00
Sub-Total	33,600.00
TOTAL	121,600.00

TABLE 8

ESTIMATED EXISTING OPERATIONAL BUDGETS
FOR SERVICES TO BE PROVIDED BY GCC

Personnel	
Salaries (Dispatchers)	
Department of Justice, 5 FTE	28,200.00
Department of Highways, 1 FTE	6,600.00
Department of Natural Resources, 1 FTE	6,000.00
Benefits	4,100.00
Sub-Total	44,900.00
Operational	
Supplies and Materials	2,000.00
Communications	1,000.00
Utilities	2,800.00
Repairs and Maintenance	4,000.00
Sub-Total	9,800.00
TOTAL	54,700.00

TABLE 9

GLOSSARY

Armory — State Armory Building

CCTV — Closed Circuit Television

Center — Governor's Command Center

CENTREX — Central Exchange (telephone company switching equipment)

CRT — Cathode Ray Tube data terminal

EOC — Emergency Operating Center

EPABX — Electronic Private Automatic Branch Exchange

FM — Frequency Modulation

GCC — Governor's Command Center

MLETS — Montana Law Enforcement Teletype System

MHz — Megahertz (1 million cycles per second)

Monitor — Closed Circuit Television Receivers

RADEF — Radiological Defense

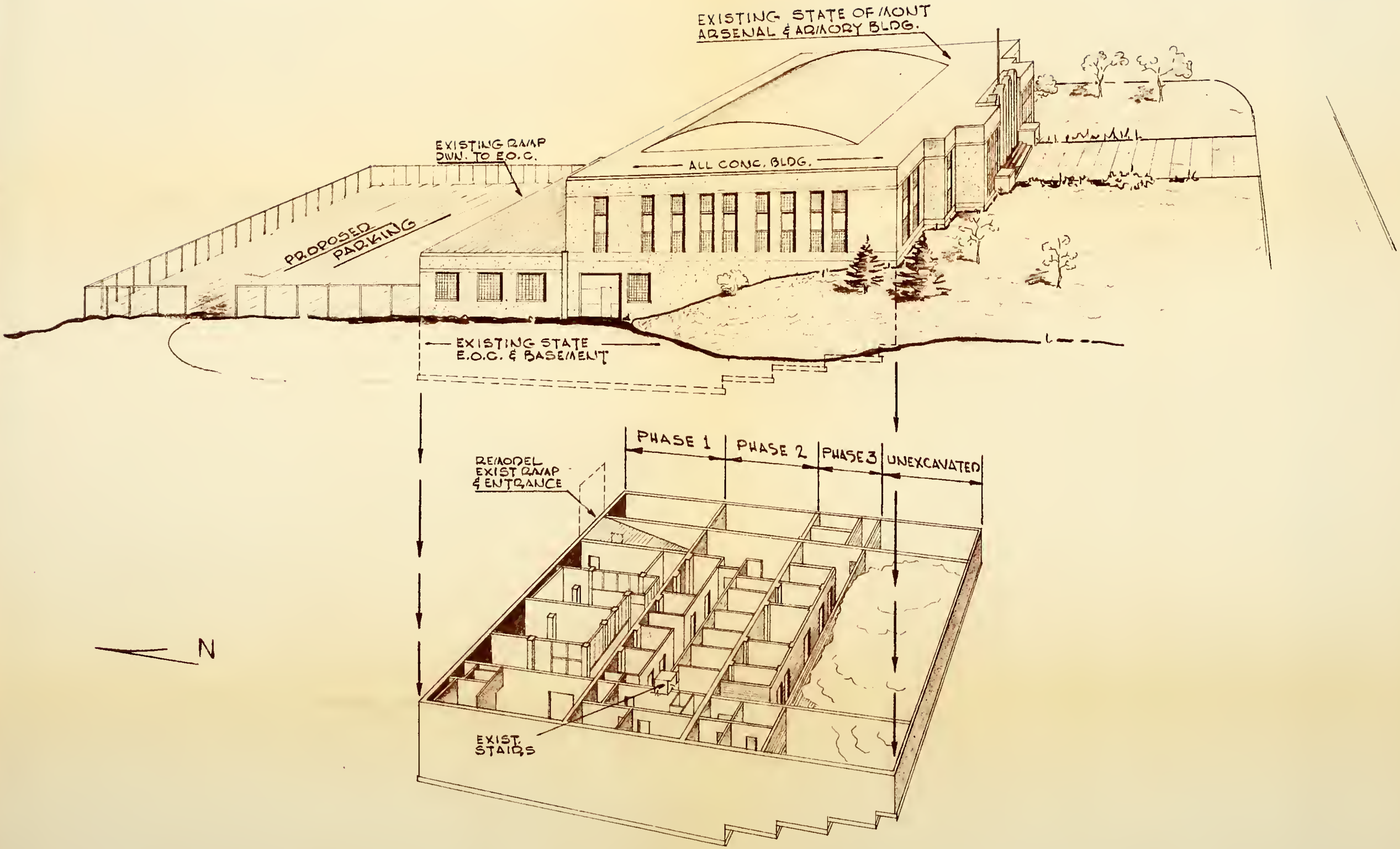
SSB — Single Side Band

STS — State Telephone System

VTR — Video Tape Recorder

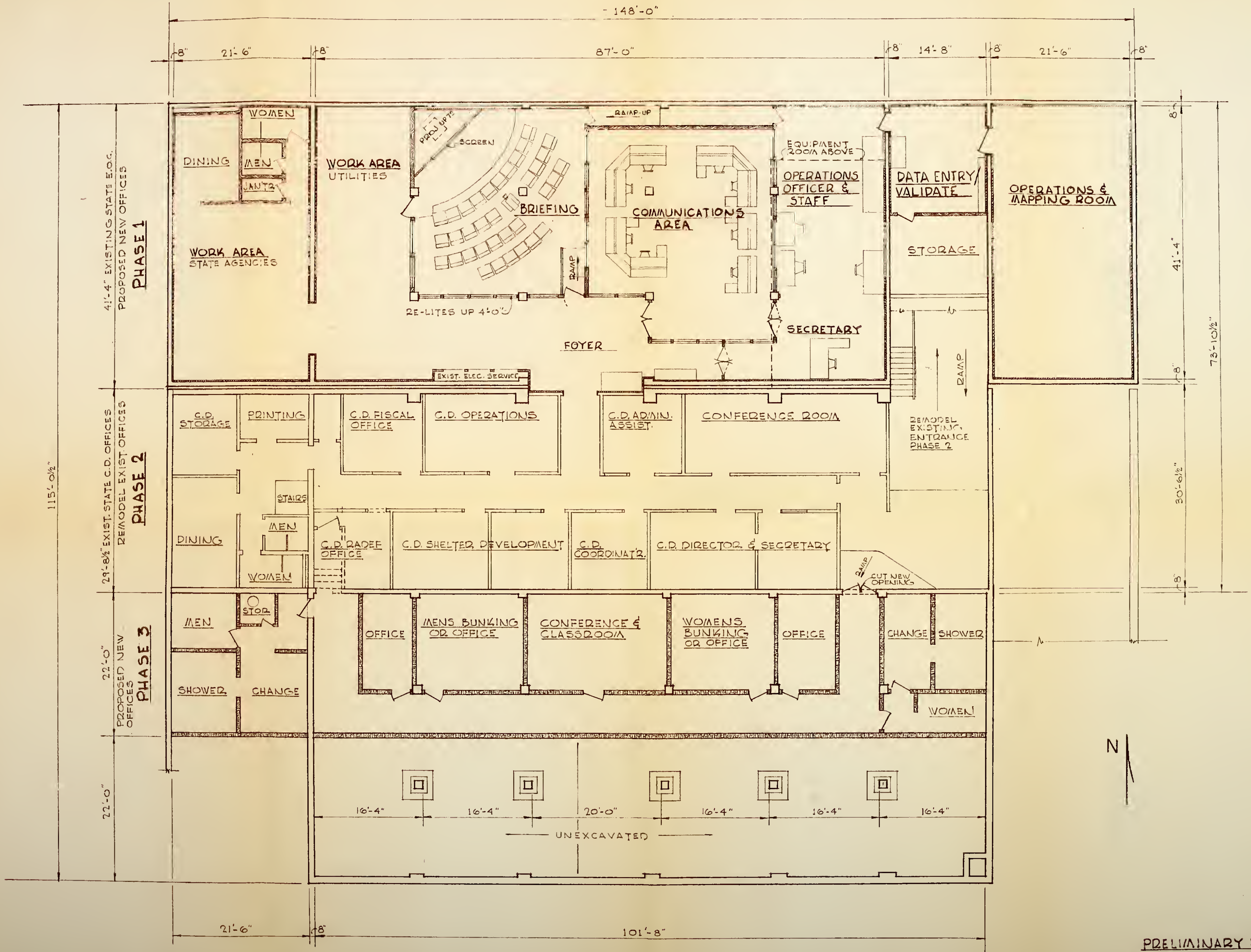
WATS — Wide Area Telephone Service

APPENDICES



THE GOVERNOR'S COMMAND CENTER

SUB BASEMENT LEVEL, STATE ARMORY BUILDING, HELENA, MONTANA
LATITUDE: N 46°35'57" LONGITUDE: W 112° 02'10"



PRELIMINARY NO-3

PREPARED BY:	STATE OF MONTANA CIVIL DEFENSE P.O. BOX 1157 HELENA, MONT.
DRAWN BY:	A. O'LEARY - ARCHITECT SHELTER DEVELOPMENT OFFICER
DATE:	AUGUST 5, 1974

THE GOVERNOR'S COMMAND CENTER

SUB BASEMENT LEVEL, STATE ARMORY BUILDING, 1100 N. MAIN STREET, HELENA, MONTANA 59601

NATIONAL SHELTER SURVEY
DATA INPUT FORM

ACTION CODE 2

GENERAL DATA | DATA PROCESSING USE

①
1(a). Old standard location: 8 3 R 9 0 0 0 2 0
1(b). New standard location:
2(a). Old facility number: A 6 8 1 0
2(b). New facility number:
3. Field office code: H M
4. Contract number: 0 0
5. CODES: PV 3 8; USE 4 7; OWN 2; SP 0; HEW 0
6. Building name: S T A T E A R M O R Y B L D G
7. Number: 1 1 0 0
8. Dir.: N
9. Street and designation: M A I N

②
10. Year built: 1 9 4 0
11. Building population: 1 0 0
12. City: H E L E N A
13. County: LEWIS & CLARK
14. State: M T
15. ZIP code: 5 9 6 0 1
16. M.I. code:
17(a). Latitude: 4 6 3 5 5 7
17(b). Longitude: 1 1 2 0 2 1 0

③
18. State Code:
19. County Code:
20. Block Identification: (a) Tract (1) Basic (2) Suf; (b) Block Number
21. Link Identification: (a) Left Tract (1) Basic (2) Suf (3) Map; (b) From Node; (c) To Node

④
22. D/I page 1 of 1
23. Update code: B
24. Total parts: 0 1
25. Zonal c.f.m.: 0 8
26. Air source: 1 ☒ Mechanical 2 ☒ Natural
27. Auxiliary power: 1 ☒ Yes 2 ☐ No
28. Relative blast protection: Basement C; 1 — 3 floors D; 4th floor and higher X
29. Fire evaluation: Occupancy 1; Construction 4; Area 16; Overall B
30. 1st floor elevation: 4 0 0 9

SHELTER SPACE DATA

	Bldg. floor		Part No.		Story		P.F.Cat.	Existing spaces					Basis	Bldg. floor		Part No.		Story		P.F.Cat.	Existing spaces					Basis	Bldg. floor		Part No.		Story		P.F.Cat.	Existing spaces					Basis
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
⑤	S	B	0	1	0	0	2	0	0	7	5	0	N	S	B	0	1	0	0	2	0	1	1	0	0	B		B	0	1	0	0	2	0	0	5	5	0	N
⑥		B	0	1	0	0	2	0	0	7	0	0	B	*																									
⑦																																							
⑧																																							
⑨																																							
⑩																																							

Remarks:

	TORNADO	HURRICANE	EARTHQUAKE	FLOOD	STORM	STORY
NATURAL DISASTER	G	G	F	G	G	2

Condition of exterior shelter signs? G

Analyst

Date 5/29/74

DCPA Form 612, April '73.